



PLANT GROWTH & DEVELOPMENT

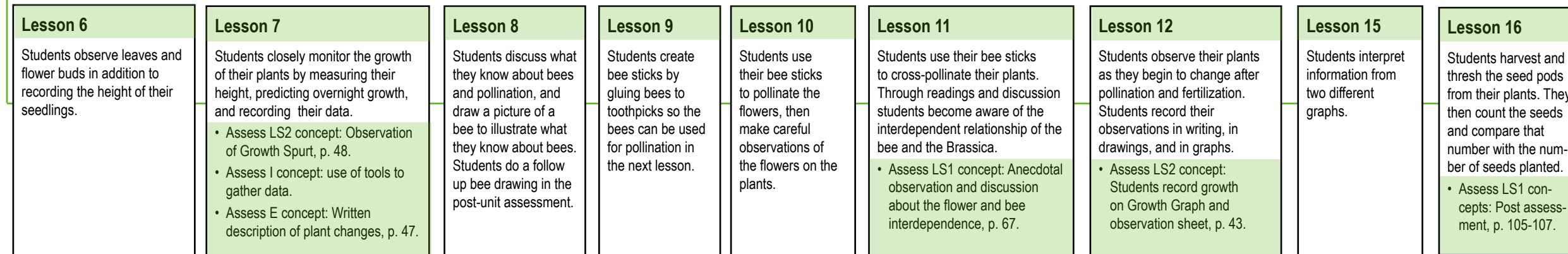
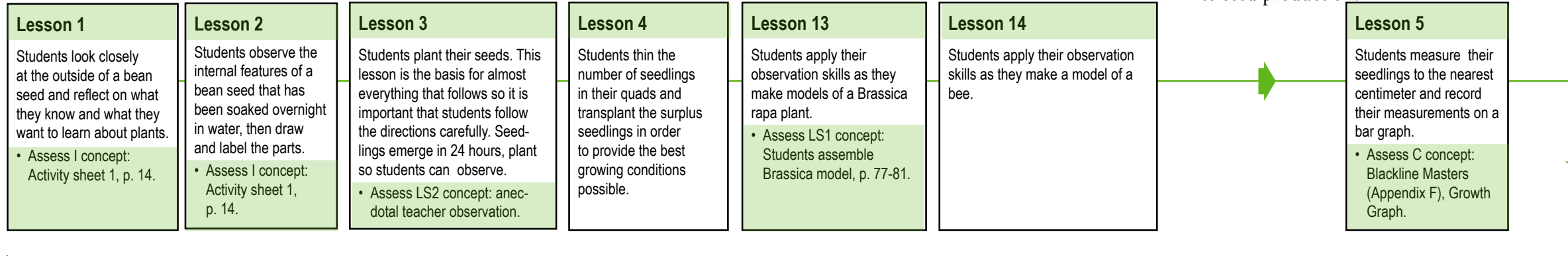
Conceptual Storyline & Assessment Map

Assessment opportunities are shown in the highlighted areas of the Conceptual Storyline. Please choose those that are most valuable to you and your students.
Full options and tools are located on the Web site at www.asdk12.org/depts/science/elementary/2Life.html.

Subconcept 1: The student understands that plants and animals have different external features that help them thrive.

Subconcept 2: The student understands that plants can change in different ways throughout their life cycle - from germination to seed production.

PRE-ASSESSMENT



POST-ASSESSMENT

Lesson 1
Students look closely at the outside of a bean seed and reflect on what they know and what they want to learn about plants.
• Assess I concept: Activity sheet 1, p. 14.

Lesson 2
Students observe the internal features of a bean seed that has been soaked overnight in water, then draw and label the parts.
• Assess I concept: Activity sheet 1, p. 14.

Lesson 3
Students plant their seeds. This lesson is the basis for almost everything that follows so it is important that students follow the directions carefully. Seedlings emerge in 24 hours, plant so students can observe.
• Assess LS2 concept: anecdotal teacher observation.

Lesson 4
Students thin the number of seedlings in their quads and transplant the surplus seedlings in order to provide the best growing conditions possible.

Lesson 13
Students apply their observation skills as they make models of a Brassica rapa plant.
• Assess LS1 concept: Students assemble Brassica model, p. 77-81.

Lesson 14
Students apply their observation skills as they make a model of a bee.

Lesson 5
Students measure their seedlings to the nearest centimeter and record their measurements on a bar graph.
• Assess C concept: Blackline Masters (Appendix F), Growth Graph.

Lesson 6
Students observe leaves and flower buds in addition to recording the height of their seedlings.

Lesson 7
Students closely monitor the growth of their plants by measuring their height, predicting overnight growth, and recording their data.
• Assess LS2 concept: Observation of Growth Spurt, p. 48.
• Assess I concept: use of tools to gather data.
• Assess E concept: Written description of plant changes, p. 47.

Lesson 8
Students discuss what they know about bees and pollination, and draw a picture of a bee to illustrate what they know about bees. Students do a follow up bee drawing in the post-unit assessment.

Lesson 9
Students create bee sticks by gluing bees to toothpicks so the bees can be used for pollination in the next lesson.

Lesson 10
Students use their bee sticks to pollinate the flowers, then make careful observations of the flowers on the plants.

Lesson 11
Students use their bee sticks to cross-pollinate their plants. Through readings and discussion students become aware of the interdependent relationship of the bee and the Brassica.
• Assess LS1 concept: Anecdotal observation and discussion about the flower and bee interdependence, p. 67.

Lesson 12
Students observe their plants as they begin to change after pollination and fertilization. Students record their observations in writing, in drawings, and in graphs.
• Assess LS2 concept: Students record growth on Growth Graph and observation sheet, p. 43.

Lesson 15
Students interpret information from two different graphs.

Lesson 16
Students harvest and thresh the seed pods from their plants. They then count the seeds and compare that number with the number of seeds planted.
• Assess LS1 concepts: Post assessment, p. 105-107.